A comparison of rural wage employment in Ghana, Malawi and Nigeria with other developing countries

September 30, 2008

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Abstract

This paper explores rural wage employment and its potential as a mechanism for improving the well being of the rural population in three African countries: Ghana, Malawi and Nigeria. Using nationally representative household survey data, the paper compares the experiences of these three countries with 11 other developing countries from around the world. We find remarkable consistency between the rural labor markets in these 14 countries. We find that the sector of employment (agricultural or non-agricultural) and the overall household livelihood strategy appear to be of limited importance in determining whether a household uses wage employment as a pathway out of poverty. Rather, high-productivity wage employment appears to be linked to the underlying assets of the household and its individual members. In particular, educational and infrastructure investment are critical for providing opportunities in the labour market that lead to higher wages. Gender is very relevant in terms of participation in labour markets as well as in wages earned, indicating that special attention be given to the gender consequences of any employment policy.

Key words: rural labour markets, livelihood strategies, non-agricultural employment, Ghana,

Malawi, Nigeria

JEL: J40, O57,

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Rural Wage Employment in Developing Countries

1. The role of rural wage employment

A defining characteristic of both the urban and rural middle class in developing countries is permanent, well-paying wage employment (Banerjee & Duflo (2008).[2] Despite this, in rural areas the labour market, at least agricultural wage employment, has often been negatively perceived as a refuge sector for the rural poor (Lanjouw, 2007). Further, the rural labour force typically grows at a faster rate than the agricultural labour force limiting the ability of the agricultural sector to absorb rural labour (World Bank, 2008). This raises questions about the potential for agricultural labour as a pathway out of poverty.

One alternative to looking for work in rural areas is migration to cities with greater potential for steady employment. There is evidence that the poor have indeed been migrating to urban centres at a rate faster than the rest of the population, although the number of poor in rural areas remains substantially higher than in urban areas (Ravallion, Chen & Sangraula, 2007). Another alternative to agricultural wage employment is the rural non-agricultural labour market. Recent studies show that the rural non-agricultural economy has increased in importance around the developing world in terms of the share of rural household income it provides. This is somewhat less true in African countries, and more generally in countries with lower levels of economic development (FAO, 1998; Reardon, Berdegue & Escobal, 2001; Winters *et al.*, 2008). What is less clear is the role that rural non-agricultural wage activities play in providing a clear exit out of poverty for rural households and whether non agricultural wage employment is truly so distinguishable from agricultural wage activities or at what point in the development process this occurs.

The objective of this paper is to analyze rural employment in three African countries in order to understand the role that off-farm labour participation plays in the well being of the rural population, and how this differs from a selection of countries from other areas of the developing world. While these three countries cannot be considered representative of all of Africa, the differences and similarities with the other developing countries are suggestive. Rural labour markets differ from urban markets primarily because of the central role of agriculture in the rural economy. Both the nature of the work done on farms and the seasonality of the demand for workers determines the organization of rural labour. Rural labour markets are also likely to be limited by the absence of infrastructure common to more densely populated areas. Without good roads and communications, both workers and employers suffer higher transaction costs in labour market interactions, making these markets "thinner" than they would otherwise be in an urban setting. Search costs are higher in the coordination of employers and workers, and the higher costs of movement reduce geographic integration. These factors are likely to create differences between rural and urban labour employment, and in assessing rural labour supply we provide contrasts to the urban sector.

As part of examining rural labour employment, it is important to understand why some individuals achieve higher wages in the labour market then others. The sector of employment is one source of difference in returns, and a common contrast is between agricultural and non-agricultural wage employment with the expectation, noted above, that agricultural wage labour tends to be low wage and non-agricultural wage labour high wage. We explore whether this is

[2] Banerjee & Duflo (2008) define the middle class as households whose daily per capita expenditures valued at purchasing power parity are between US$2 and $4, and those between $6 and $10.

the case both in general and through examining separate non-agricultural industries. Additionally, we want to consider what underlying factors—such as gender, education, land access and infrastructure—are correlated with labour market employment and the level of wages.

Further, many rural households in Africa and the developing world in general are involved in multiple economic activities, including agricultural production, in part due to the seasonal nature of farming. It is thus critical to examine what relationship may exist between a household's overall livelihood strategy and wage employment. Through this combination of analyses we hope to provide a clear understanding of rural labour employment in these three African countries, as compared to other countries in the developing world.

The paper is organized as follows in the following sections: i) understanding the time dimension of participation in employment (Section 3), ii) comparing agricultural and non-agricultural activities, including by industrial sectors (Section 4), iii) understanding the key factors that are associated with higher return wage employment (section 5), and iv) linking individual wage employment to household livelihood strategies (Section 6). This is preceded by Section 2 which provides an overview of the data, while Section 7 provides conclusions.

2. The RIGA multicountry database

The analysis is based on data from 14 developing countries in the Rural Income Generating Activities (RIGA) database. The RIGA database is a pool of multipurpose surveys from countries in the four principal developing regions—Asia, Africa, Eastern Europe and Central Asia, and Latin America—made available via a joint initiative of the World Bank and the Food and Agriculture Organization of the United Nations.[3]

Creating comparable individual-level labour data requires establishing a consistent framework to resolve the many challenges inherent in a multi-country analysis.[4] Given data limiations, we are unable to create a uniform definition of rurality; instead we use government definitions, which reflect local information of what constitutes a rural area (Carletto *et al.*, 2007). The definition of rural is based on the location of the domicile of the household and not of the employment location, since few surveys have detailed information on job location. The focus of analysis is on individuals of working age, defined here as those between the ages of 15 and 60. Labour market participants are defined as any individual in the household in this age category that responded to labour time and earnings questions in wage employment modules of the corresponding survey. Along with the information on labour market activities, individual-level and household-level variables are also available in these data sets. This allows for an investigation of how labour market participation and remuneration varies based on individual and household factors. The final data set includes information for each country on individual labour participation, time participation categories, daily wages, individual characteristics and household level characteristics. Table 1 lists the countries included in the dataset, the particular survey used and the number of rural individuals of working age in each survey.

[Table 1]

3. Rural versus urban employment: Participation and the permanence of work

[3] Information on the RIGA database can be found at http://www.fao.org/es/ESA/riga/index_en.htm.
[4] Details concerning the construction of comparable labor data can be found in Quiñones *et al.* (2008).

Overall participation rates vary greatly across countries, suggesting substantial differences in rural labour markets in each developing country (Table 1). Two of the African countries, Ghana and Nigeria, have much lower rates of participation then the other countries, with less then 10 percent of adults participating in rural labor markets, while rates in Malawi are comparable. In general, rural labour market participation rates are slightly lower than urban rates; across all countries rural participation rates are, on average, 88% of urban rates. The shares corresponding to Ghana and Nigeria are somewhat lower, while in Malawi, the rural participation rates are higher then urban rates. Comparing rural labour market participation rates across level of development, measured by GDP per capita (Figure 1), few clear trends are evident; participation rates climb slightly in urban areas as development occurs—possibly reflecting the rise of the middle class noted by Banerjee & Duflo (2008). The lack of clear patterns across the globe in the countries in our sample, provides a strong indication that rural labour market participation reflects local conditions.

[Figure 1]

Because of its association with long-term, stable and presumably high productivity work, we are interested in distinguishing permanent work from casual and seasonal employment. Defining this in practical terms given the available data requires distinguishing the duration and frequency of work. *Duration* is the length of time that a job has continuously been worked at, by a specific person, in a given time span and *frequency* refers to how often a job is worked at, by an individual, in a given time span. To operationalise this distinction in a manageable framework, employment is categorized using combinations of duration and frequency into one of the following four classifications: i) Full Year-Full Time (FYFT), ii) Full Year-Part Time (FYPT), iii) Part Year-Full Time (PYFT), and iv) Part Year-Part Time (PYPT).[5]

In general, rural labourers are not permanent workers since few work full time for a full year and instead work in different combinations of full/part year and full/part time (Table 1), Seasonality and casual work are clearly important features of rural labour markets. In countries with full data[6] only in Bangladesh does full year, full time represent over 50% of the employed. Over half of the countries, including all four Latin American countries, are more or less evenly split between full year and part year employment. Ghana and Nigeria lack the full data; over half of rural labor market participants have full time employment (whether part or full year). In contrast, in Malawi, less then a quarter of employment was full time; the vast majority are part time, part year, ganyu labor. In urban areas, the vast majority of labor market participants in all three countries have full time positions, which is similar to most of the other developing countries in this sample.

Of those that participate in labour markets, rural workers are, on average, about two-thirds as likely to be in permanent work compared to their urban counterparts. While this is the case, the amount of permanent work in rural areas increases with the level of development (Figure 2) suggesting that it approaches urban levels as development occurs. Thus, while participation rates in rural labour markets do not appear to increase dramatically with the level of development, the composition of rural labour appears to shift towards more permanent work, becoming more like the urban sector.

[5] The precise definitions of these variables can be found in Quiñones et al (2008).

[6] Due to insufficient information on time use in the surveys, it is not possible to distinguish Full Year and Part Year for Ghana, Nigeria and Bulgaria. Instead these are divided only by Full Time and Part Time.

[Figure 2]

4. Agricultural versus non-agricultural employment OR low versus high productivity employment?

Agricultural wage employment is typically associated with poverty and considered an occupation of last resort, as unskilled labor is often the only available asset for poor households (Lanjouw, 2007). At first glance, this view is largely confirmed by the rural employment data from the countries under study. Among the rural population that participate in each set of activities, the poorest quintile in every country participates in greater numbers in agricultural wage employment than in non-agricultural wage employment (Figure 3A). This is most pronounced in the Asian and Latin American countries, as well as in Nigeria and Malawi, where 30-50% of all agricultural wage participants are in the poorest quintile. In all countries except Ghana and Bulgaria, the share of agricultural wage participants declines at higher expenditure levels. This is in contrast to non-agricultural activities which tend to be more evenly distributed across expenditure quintiles (Figure 3B).

By virtue of the seasonality of production, agriculture tends to lead to more casual work opportunities than non-agricultural activities. For all countries except Ecuador, non-agricultural activities are more likely to be full year and full time (Figure 4). These trends are more pronounced in Malawi and the Asian countries and least pronounced in the Latin American countries where time use trends for agricultural and non-agricultural activities are most similar. Even among non-agricultural activities, there appears to be greater seasonality and casual labour opportunities when compared to urban counterparts. A clear feature of rural labour markets is the lack of permanence in employment. This is particularly true for the one African country with full data: Malawi.

[Figure 4]

Agricultural wage employment tends to be relatively unskilled. In all countries, agricultural labourers have lower levels of education than non-agricultural workers (Figure 5). The relatively poor and unskilled nature of agricultural wage is apparent even when non-agricultural activities are divided by industry (manufacturing, construction, commerce and related activities, services, mining and utilities, and other activities). Almost all sectors boast higher education levels than agriculture (Figure 6), and particularly services in the African and Asian countries. The average years of education for participants in the service industry are higher than the total average education for participants in agriculture in all cases. This is in contrast to construction where in most cases the average education of participants is near or below the total average education although it remains higher than the education levels found for agricultural participants in all cases but one. It suggests that while construction is not a high education activity, it appears to be an activity for those with at least a minimal level of education.

[Figure 6]

The driving force behind the positive link between higher household level wealth, skill level, and non-agricultural wage employment is likely to be the fact that agricultural wages tend to be lower than non-agricultural wages. In fact, in all of the African and Latin American countries, and most of the others, the agricultural wage distribution is lower than the non-agricultural wage distribution for rural workers (Figure 7).[7] This pattern of higher wages for non-agricultural employment holds even when examining permanent versus casual/seasonal work. Looking across levels of development (Figure 8), the ratio of agricultural to non-agricultural wage appears to decline over time. Overall the picture that emerges is that, as development occurs, rural labour become more permanent, and the gap between agricultural and non-agricultural wages narrow.

[Figure 7]

[Figure 8]

Although agricultural wages tend to be lower than non-agricultural wages and the poor and unskilled tend to participate disproportionately in agricultural wage activities, there are better off households that are employed in agricultural wage employment as well as a substantial number of relatively poor households involved in non-agricultural wage activities along with the wealthier households. Further, the wage distributions shown in Figure 7 clearly show a significant overlap in the daily earnings in each sector in each country. As such, this sectoral distinction is not exceptionally useful for understanding the role of rural labour markets in improving the well being of the rural population. Since our underlying interest is the identification of those activities which receive higher wages, thus serving as a potential pathway out of poverty, we need to come up with a different categorization.

To get a sense of the share of activities that are high and low productivity, commanding high and low wages, Lanjouw (1999) uses the average agricultural wage as a reference point defining those higher as high wage and those below as low wage. Here we follow a similar approach but use both agricultural and non-agricultural wages and take into account that non-agricultural wages tend to be higher than agricultural wages. Three wage categories are defined: i) *low wage*: activities earning less than the median agricultural wage; ii) *medium wage*: activities earning between the median agricultural wage and the median non-agricultural wage; and iii) *high wage*: activities earning more than the median non-agricultural wage. This distinction works well except in the cases of Albania, Bulgaria and Vietnam, all former or currently communist countries, where non-agricultural wages are not clearly higher than agricultural wages. In these cases, we divide the sample between high and low wages based on the median agricultural wage.

Under this categorization, a significant number of agricultural workers emerge who should be considered high wage, and similarly a significant amount of non-agricultural work is low wage (Table 2). In the African countries, 25-30 percent of agricultural work is high wage with equivalent returns to higher-value non-agricultural work. Similarly, about a quarter to a third of non-agricultural work is low-wage and similar to low-value agricultural work. Comparable numbers emerge for Latin America except that high value agricultural work is less prevalent (just below 20 percent). In Asia, the numbers are lower for Nepal and Bangladesh

[7] Distributions are presented as the log of daily wages. Daily wages are used rather than hourly wages since these are the most consistent across the national surveys for the included countries and do not require assumptions about the hours per day worked.

where only around 10 percent of agricultural earnings are in the high productivity category and smaller numbers of non-agricultural workers are in the low productivity category. Tajikistan follows a similar pattern. Thus, in these cases the two sectors are more distinct. Further, the analysis of time categories (not shown) suggest that there are no clear distinctions in wages for permanent, casual and seasonal work. Even when examined by non-agricultural industry (not shown), a range of levels of wages are found across industries, with only services and mining and utilities consistently high wage. These results suggest that, across countries, there appears to be other factors driving the differences in wages. The question we then want to address is what are the key factors associated with workers participating in higher wage activities.

[Table 2]

5. Key factors influencing access to high productivity employment

We use multivariate regression to explore the factors driving differences in labour market participation and wages. First, we analyze participation in wage employment and then, among those that participate, what factors are correlated with low versus higher levels of wages. This is done by examining probit regressions (one is participation and zero otherwise) on overall labour market participation (Table 3) followed by probit regressions on participation in the particular wage category (Table 4) and participation in specific employment sectors (Table 5) . The second and third set of probit regressions are run only for those individuals that participate in wage employment activities. Along with examining participation, the factors associated daily wages earned are analyzed using standard wage equations where the dependent variable is the log wage (Table 6). Overall, three factors appear to matter most in labour markets: i) the gender of the individual, ii) the level of education, and iii) location and corresponding access to infrastructure.

[Table 3]

Gender is highly correlated with labour market activity. Controlling for other factors, women are less likely to participate in labour markets than men. This could be due to the existence of social constraints and/or gendered household responsibilities.. The magnitude varies across regions; the largest effects are found among the Latin American countries where on average rural women are 35-50 percent less likely than men to participate in labour markets. The differences are much smaller in Ghana and Niger (4 percent), while in Malawi women are 24 percent less likely (Table 3). Overall, there appears to be a link between labour market participation and development, with women being less likely to participate in rural labour markets in more developed countries (Figure 9). For those who do participate in labor markets, no clear pattern is evident across countries in terms of participation in agricultural wage employment, including among the three African countries. In Malawi women are approximately 7 to 8 percent more likely to work in agriculture then men, while in Ghana the reverse is true. Similar, while in Malawi and Nigeria women are less likely to work in commerce, in Ghana they are more likely. In all countries in the sample women are less likely to work in Services, with the exception of Malawi. Moreover, employed women have a higher probability of working in low productivity jobs than high productivity jobs; this dichotomy holds in all three African countries, and is particularly strong in Malawi (Table 4). Examination of daily wage earnings confirms that in 14 of 15 countries males earn significantly more than females in the wage market, with

females earning between 5 and 50 percent less than males when controlling for basic individual characteristics (Table 6). In Ghana and Nigeria women earn approximately 15 percent less then males, while in Malawi the difference is 30 percent.

[Figure 9]

The key to participating in high value wage employment activities appears to be education. Along with influencing overall participation, education is closely linked to high wage employment. In all 15 countries, education decreases the likelihood of participation in agricultural wage labor. Further, in 13 of the 15 countries, education is negatively associated with participation in low wage employment and positively associated with participation in high wage employment, with each additional year of education increasing the probability of high productivity employment by 1 to 4 percent (Table 4). This is true for all three African countries, though the impact of education in Malawi is a third to a half as big as the other two African countries. The results indicate the effects are stronger for higher levels of development suggesting education becomes even more important for participation in high wage activities in relatively wealthier countries (Figure 9). Not surprisingly then, education is associated with higher wages in all countries except for Vietnam and Albania (Table 6). The effect is also much smaller for Malawi.

[Table 4]

Infrastructure access and proximity to urban areas[8] are also important, tending to be negatively associated with low wage work and positively associated with high wage work in 12 of the 15 countries (Table 4). This relationship gets slightly stronger with the level of development (Figure 9). Infrastructure and proximity also appears to be associated with higher wages with those closer to urban settings earning higher income except in Eastern Europe (Table 6), and the coefficient for Nigeria, while positive, is not significant. Those that are close to urban centres and thus with greater access to infrastructure are in a better position to get high productivity work and to earn more money from that work. Location of a household in a rural setting and access to public infrastructure influence the ability to take advantage of rural labour markets.

Land has historically been viewed as a key asset for rural households because of the link between land and agriculture. The relationship between household land ownership and wage employment is of interest since it may represent an agricultural path as opposed to one based on labour employment. The results indicate there is generally a negative relationship between land and participation in labour markets suggesting that the lack of land pushes working age individuals into the labour market (Table 3), with no differences between the African and other countries. Yet the magnitude of this effect is generally not great and in terms of productivity, there appears to be little influence of land ownership on the type of activity of the labourer (few

[8] Access to infrastructure (such as electricity) and distance to urban centers is likely to influence labor market participation yet creating comparable measures of infrastructure access and proximity is challenging because of difference in variables available across countries. Following Filmer & Pritchett (2001), a principal components approach is used to create an infrastructure/proximity access index that includes both public goods (electricity, telephone, etc.) and distance to infrastructure (schools, health centers, towns, etc.). The higher the index the more remote households are from urban areas.

results are significant and thus not shown in the figure). Other factors seem to be more important in determining whether individuals work and the type of work they obtain.

[Table 5]

[Table 6]

The rural labour economy is clearly complex and the characterization of the agricultural labour employment as a refuge sector of the poor and unskilled while appropriate in some circumstances fails to recognize that agricultural wage labour can offer a pathway out of poverty and that much of the non-agricultural sector can be characterized in a similar manner. The differences across the non-agricultural industries indicate that even within in the sectoral categorization there remain substantial differences across the industries. The analysis presented indicates that in evaluating rural labour markets, it is more appropriate to consider the level of wages and, correspondingly wage earners of these activities and the factors that influence these wages.

6. Rural wage employment in household livelihood strategies

As noted in the introduction, a key characteristic of the rural economy is the central role played by agriculture. Participation rates in agriculture of rural households in developing countries remain high, even if household members work off-farm (Davis et al, 2007). An individual's decision making regarding labour market participation is likely to be at least partially based on the household's overall livelihoods strategy. As such understanding rural labour markets requires considering labour participation in the context of household livelihood strategies.

In an overall household strategy to improve well being, wage employment may be used as a specific pathway out of poverty and thus the focus of the livelihood strategy or as a mechanism to diversify income to obtain liquidity or hedge against risk. Understanding the motivation for a household strategy is complicated by the fact that multiple household members are involved in economic activities and what may appear to be diversification at the household level may actually be individual specialization in the highest return activity available to that particular individual. While high productivity wage employment opportunities are likely to reflect specialization, low return activities are less likely to be so except in those cases where households have such limited assets they have no option but to be employed primarily in low return activities.

To understand how individual wage employment fits with a household's overall livelihood strategy, we need to turn to household-level data and categorize household strategies. Households can be defined as having income from three main sources: i) wage employment, ii) agricultural production, and iii) nonfarm self employment including transfers and other income sources. Households can then be defined as diversified if less than 75% of their income is from a single source and specialized if 75% or more of their income comes from a single source. Using this definition, between a quarter and a half of rural households can be viewed as diversified while the rest specialize in certain activities (Figure 10). Except in our three African countries, diversified households are the norm. In Africa, specialisers tend to be in farming with over half of households in all three countries specializing in agricultural production.

A clear element in household diversification is through labour employment (Figure 11). Wage labour participation rates are over 50% in most countries for diversified households with rates over 70% in a number of countries including all the Latin American countries, and in Africa, Malawi. Furthermore, it is common for multiple household members to work off farm with nearly all countries having over 25 percent of diversified households with more than one member in wage employment. Outside our African countries, among households that specialize in wage employment this number is even greater with over one-third of households having more than one member in wage employment. In the African countries, those that specialize in wage employment tend to rely on one wage earner. Even among households specializing in farm and nonfarm self employment activities, a sizeable share—often above 20%— participate in wage employment, though in the African countries this is only true in the case of Malawi.

[Figure 10]

Individuals in households that specialize in wage employment income tend to be in high wage activities, especially in the African countries (Figure 11). In all three countries, 65 percent of households specializing in wage employment had at least one household member in a high wage activity. Within these wage specializing households there are, however, a large share of individuals in medium and low wage employment. Specializing in wage employment does not guarantee that it will be lucrative. Diversified households also have a mix of wage earners, and those households in the two other categories of wage specialization tend to be less likely to be in high wage activities if they participate in labour markets.

[Figure 11]

Overall, labour markets play a critical role in the livelihood strategies of rural households. Among those that specialize in wage labour, there is a clear tendency for those households to have a member in a high wage activity suggesting these households are using the labour market as a pathway out of poverty. At the same time, a significant number of wage specializing households remain in low wage employment indicating that there continues to be a segment of households using wage employment as a survival strategy. Among diversified households a mix of high- and low wage employment activities are employed reflecting the multiple uses of wage employment in household livelihood strategies.

7. Discussion and policy implications

Wage employment is clearly an important component of the strategies employed by rural households and individuals to maintain and improve their well-being, in Africa as well as in other regions of the developing world. Participation rates in rural labour markets, however, vary substantially across developing countries and are complicated by the fact that rural labourers often work in casual or seasonal employment rather than in permanent employment. This is particularly the case in the three African countries included here, where two have very small labor markets (Ghana and Nigeria), and the third a larger, but extremely casual and seasonal rural labor market. Beyond the fact that households in these three countries are more specialized

in on farm activities and rural labor markets are less developed, the underlying dynamics in each country are remarkably similar.

While the poor and unskilled are disproportionately involved in casual and seasonal agricultural activities, a significant number of better-off individuals are employed in agriculture and significant number of non-agricultural labourers are poor. This suggests that agricultural wage employment is not solely an activity of the poor, nor is non-agricultural wage employment solely the activity of the rich. The distinction in labour markets between the agricultural and non-agricultural sectors is thus somewhat a false dichotomy. Both can play similar roles for the household in terms of a pathway out of poverty, as a refuge sector for those with few options or as a mechanism to provide liquidity and hedge against risk.

Whether a household is diversified or specialized the role of agricultural and non-agricultural activities appears similar. Households that are specialized in wage employment appear to be largely taking this path because they have access to high-productivity work. The sector of employment and the overall household strategy appear to be less important in determining whether a household uses wage employment as a pathway out of poverty. Rather, it appears to be more linked to the underlying assets of the household and its individual members. In particular, education appears to be the critical asset that determines both participation in and wages earned in rural labour market activities. Educational investment in rural areas appears key to providing options to households regardless of industry. Infrastructure/proximity also plays a key role in many cases and proximity to urban centres creates greater opportunities for labour markets to play an important role in poverty alleviation. Unfortunately, the gender of the individual seems to greatly influence the ability to participate and earn wages with females less likely to participate and to generally earn less than their male counterparts. This clearly needs to be further explored.

In terms of policy for developing countries, this analysis points to educational and infrastructure investment as critical for using the labour market to provide opportunities for exiting poverty. It also requires special attention be directed to the gender consequences of any employment policy and potentially gender-targeted interventions. Of course, this analysis is limited in that it focuses on the labour supply of rural household and the key factors influencing this supply. With such data, it is difficult to assess the demand for rural labour, what influences that demand and how opportunities can be created for rural households through expanded high-productivity employment. Our results do indicate that such returns can be found in any sector, including agriculture, suggesting that what is important is not the sector but the dynamism in that sector. As development occurs the expectation is that agricultural employment will diminish, but agricultural is still likely to be a key driver of growth even in the non-agricultural economy through linkage effects, particularly in Africa. What is harder to know is what other drivers of the rural economy are. The industrial classifications normally provided in household surveys and used here say little about what is the ultimate source of rural economic growth. Is it ultimately agriculture or are other industries such as tourism, mining, etc driving this growth? While some answers to these questions exist (see Haggblade, Hazell & Reardon, 2007), future research should explicitly consider the link between different sets of rural activities and agricultural and non-agricultural employment, and how these vary by country and region.

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Table 1 Participation in Wage Employment

	Name of Survey	Rural Working Age Individuals	Rural Employed Individuals	Rural Participation Rate	Urban Participation Rate	Time use of rural labor market participants				Time use of urban labor market participants			
						FYFT	PYFT	FYPT	PYPT	FYFT	PYFT	FYPT	PYPT
Sub-Saharan Africa													
Ghana98	Ghana Living Standards Survey Round 3	8,600	737	8.3%	14.2%	57.0%		43.0%		77.7%		22.3%	
Malawi04	Integrated Household Survey - 2	22,016	9,000	38.9%	25.0%	8.7%	13.3%	1.2%	76.8%	72.0%	21.9%	3.5%	2.6%
Nigeria04	Living Standards Survey	35,521	1,675	4.4%	9.8%	69.8%		30.2%		81.7%		18.3%	
South & East Asia													
Bangladesh00	Household Income-Expenditure Survey	14,282	6,361	42.7%	54.4%	71.8%	14.5%	8.0%	5.7%	86.3%	5.4%	6.8%	1.5%
Indonesia00	Family Life Survey - Wave 3	13,193	3,409	26.9%	32.1%	34.3%	33.7%	12.7%	19.4%	58.8%	21.5%	11.7%	8.1%
Nepal03	Living Standards Survey II	7,767	4,829	64.5%	56.9%	16.0%	29.8%	7.9%	46.3%	61.1%	15.0%	11.9%	12.1%
Vietnam98	Living Standards Survey	11,772	3,356	27.8%	37.2%	12.5%	54.2%	7.4%	25.9%	49.0%	28.9%	8.2%	13.9%
Eastern Europe & Central Asia													
Albania05	Living Standards Measurement Survey	4,998	671	13.4%	30.5%	49.0%	41.3%	2.8%	6.9%	67.3%	23.0%	3.0%	6.7%
Bulgaria01	Integrated Household Survey	1,340	630	47.0%	61.2%	76.7%		23.3%		89.2%		10.9%	
Tajikistan03	Living Standards Survey	9,795	3,211	32.7%	20.4%	9.3%	9.2%	39.4%	42.2%	10.5%	7.1%	57.4%	25.0%
Latin America													
Ecuador95	Estudio de Condiciones de Vida	6,275	2,342	37.8%	41.6%	33.7%	31.2%	15.8%	19.4%	40.6%	35.0%	10.4%	14.0%
Guatemala00	Encuesta de Condiciones de Vida	10,151	3,935	38.6%	45.4%	38.5%	45.3%	10.6%	5.6%	49.1%	33.7%	10.9%	6.3%
Nicaragua01	Encuesta de Medición de Niveles de Vida	5,408	1,767	34.3%	40.4%	35.9%	43.7%	7.3%	13.2%	50.0%	34.7%	6.8%	8.5%
Panama03	Encuesta de Niveles de Vida	7,001	2,640	36.2%	47.7%	39.8%	39.9%	10.6%	9.7%	57.8%	31.0%	5.6%	5.6%

Notes: This only includes individuals who are of working age (15 and 60 years old). Participation rates are weighted to be nationally representative. For the time categories, it is not possible to classify Ghana98, Nigeria04, & Bulgaria01 according to the four time categories due to insufficient information on time use.

Figure 1. Labour market participation: rural versus urban

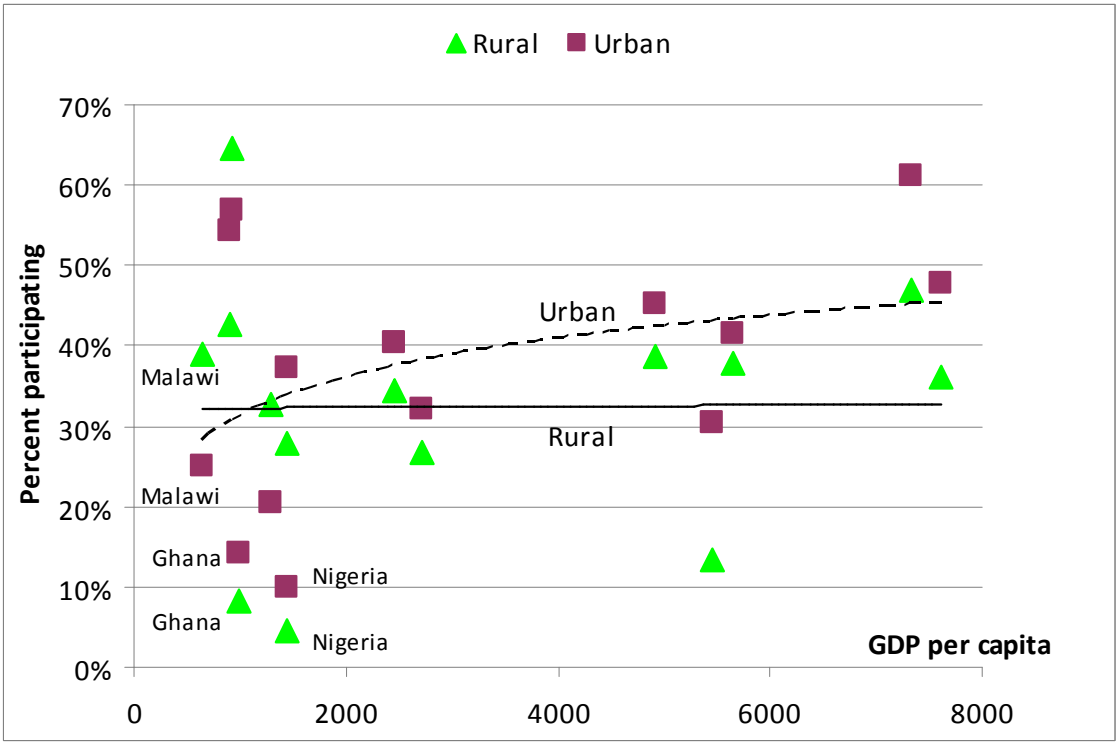

Figure 2. Participation in permanent work: Rural versus urban

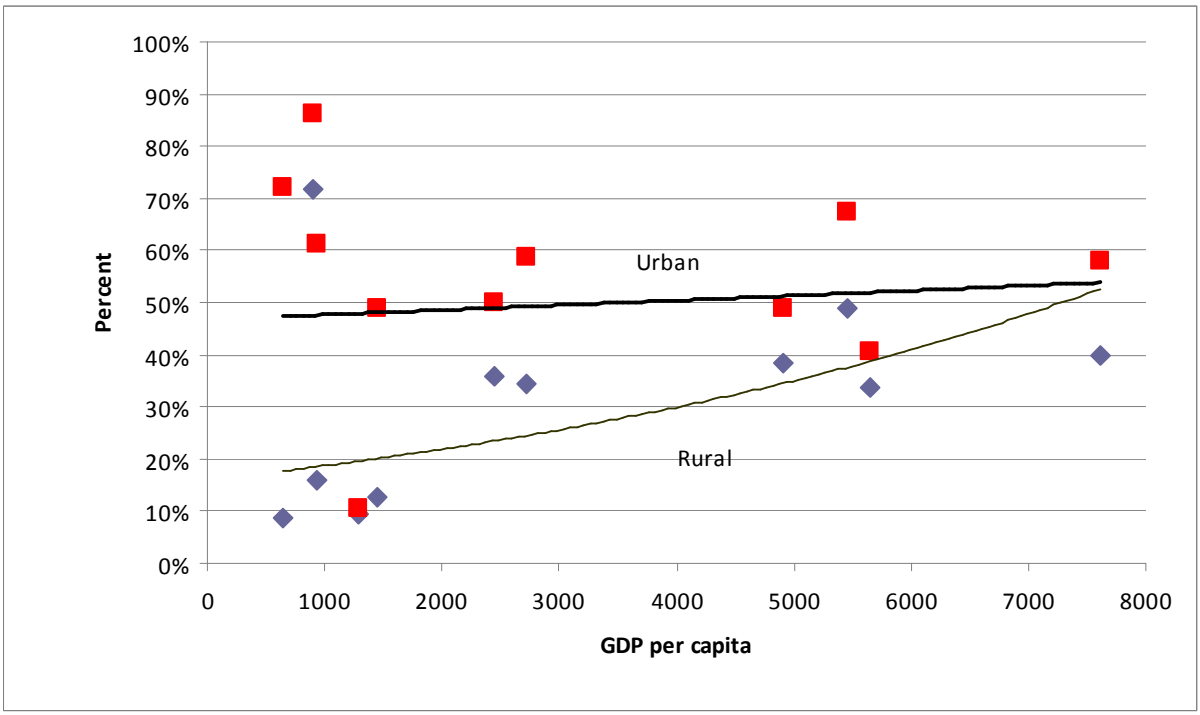

Figure 3A. Participation in agricultural wage employment

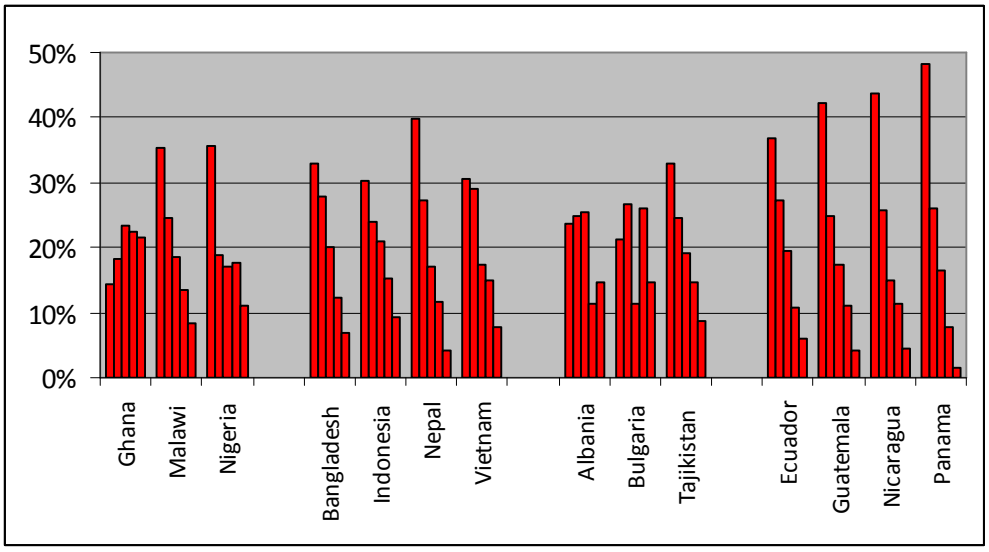

Figure 3B. Participation in non agricultural wage employment

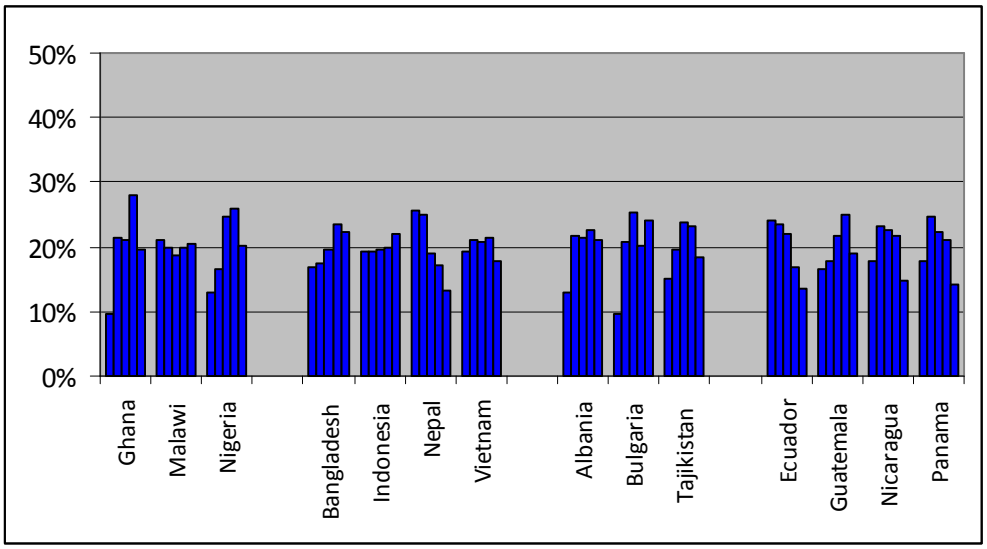

Figure 4. Share of employment which is permanent, by sector of employment

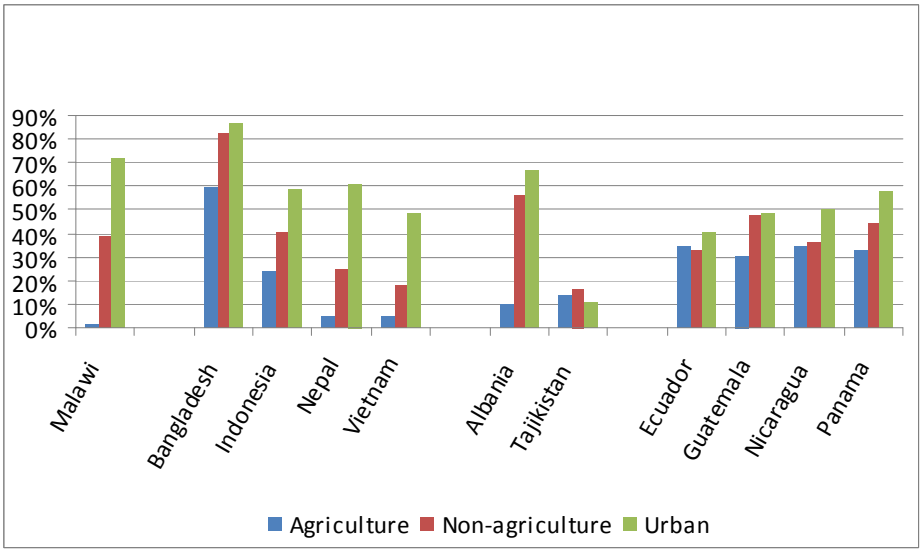

Figure 5. Average years of education, by sector of employment

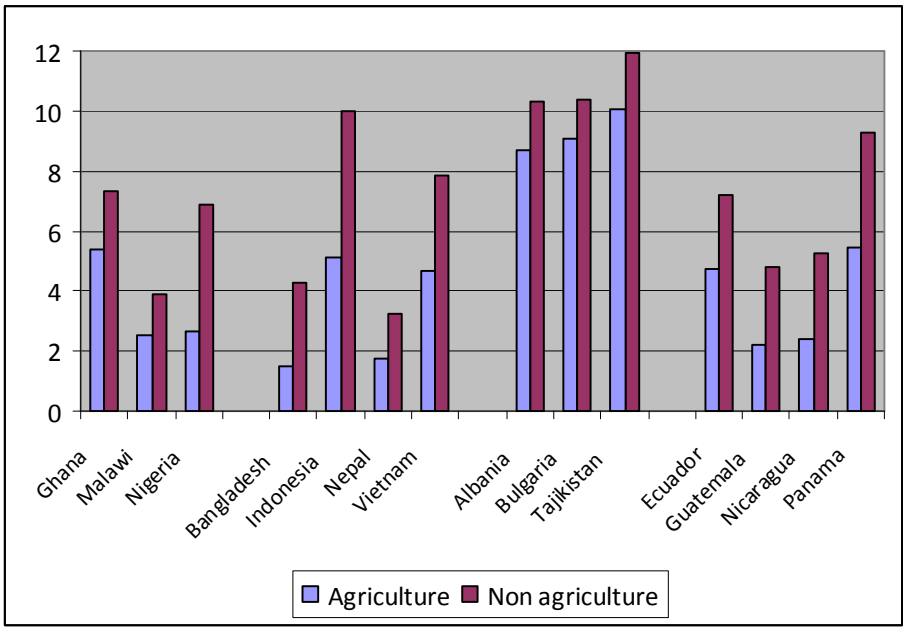

Figure 6. Ratio of average years of education of participants in agricultural wage employment to sectors of non agricultural wage employment

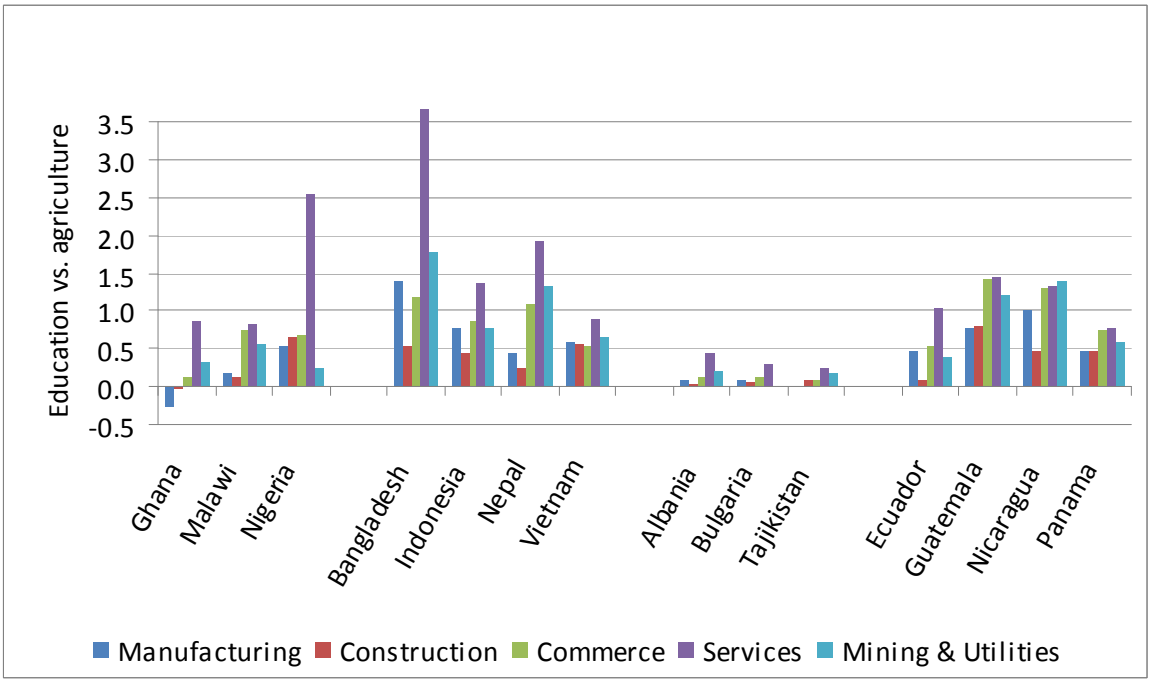

Figure 7. Distribution of wages in agricultural and non agricultural wage employment

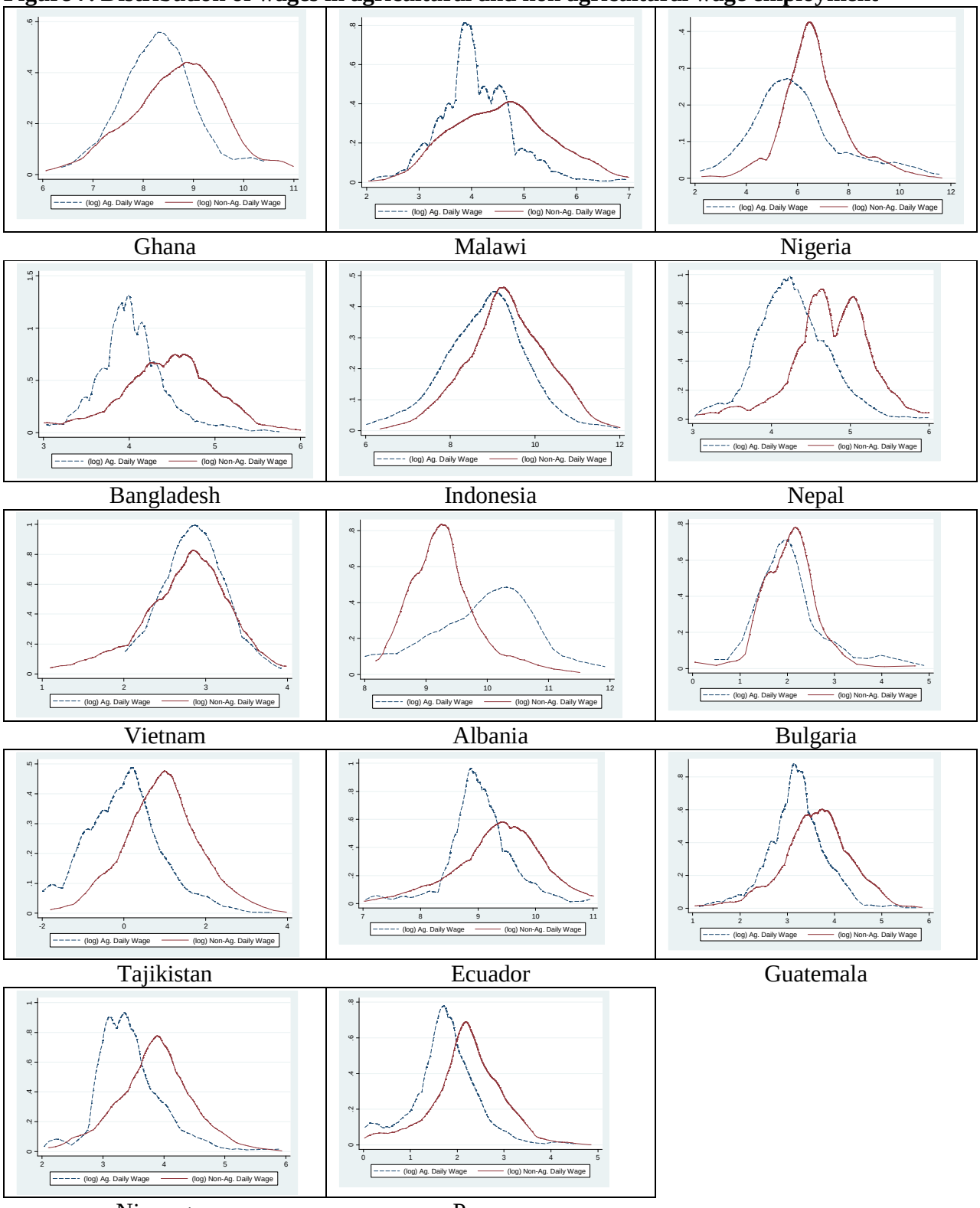

Figure 8. Non-agricultural versus agricultural wage ratios by level of development

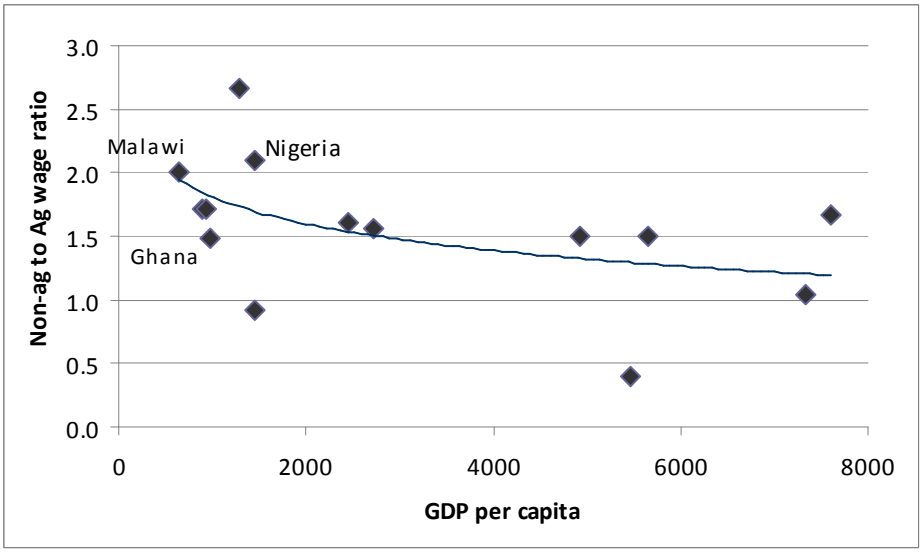

Table 2 - Participation by levels of productivity (for participants only)

in percent	All participants			Agriculture			Non-agriculture			Urban		
	Low	**Medium**	**High**	**Low**	**Medium**	**High**	**Low**	**Medium**	**High**	**Low**	**Medium**	**High**
Sub-Saharan Africa												
Ghana98	36	17	47	48	27	25	34	15	51	25	16	59
Malawi04	47	23	30	52	23	25	28	21	51	8	15	78
Nigeria04	31	23	46	52	18	30	23	25	52	22	24	54
South & East Asia												
Bangladesh00	35	32	33	51	37	12	20	28	52	22	21	58
Indonesia00	39	20	42	52	19	29	31	20	49	24	16	60
Nepal03	32	38	30	55	35	10	14	40	47	20	23	57
Vietnam98	56	-	44	53	-	47	58	-	42	36	-	64
Eastern Europe & Central Asia												
Albania05	81	-	19	43	-	57	88	-	12	86	-	14
Bulgaria01	49	-	51	53	-	47	48	-	52	40	-	60
Tajikistan03	44	32	24	53	32	15	15	33	52	10	21	69
Latin America & the Caribbean												
Ecuador95	42	26	32	54	27	19	29	25	46	23	20	57
Guatemala00	45	24	32	57	25	19	30	22	48	19	18	64
Nicaragua01	40	27	33	57	26	18	24	28	48	15	25	61
Panama03	37	30	33	55	28	17	24	31	45	13	22	65

Table 3 - Probits on Participation in Rural Labor Markets

	Sub-Saharan Africa			**South & East Asia**				**Eastern Europe & Central Asia**			**Latin America & Caribbea**		
	Ghana98	Malawi04	Nigeria04	Bang00	Indonesia00	Nepal03	Vietnam98	Albania05	Bulgaria01	Tajik03	Ecuador95	Guat00	Nica01
Gender (female=1)	-0.0401***	-0.2383***	-0.0301***	-0.0142	-0.2115***	-0.0776***	-0.1380***	-0.1459***	0.0149	-0.1341***	-0.3767***	-0.4818***	-0.3529***
	0.0000	0.0000	0.0000	0.1078	0.0000	0.0000	0.0000	0.0000	0.6164	0.0000	0.0000	0.0000	0.0000
Education (years)	0.0070***	-0.0062***	0.0038***	-0.0084***	0.0037***	-0.0141***	-0.0004	0.0215***	0.0374***	0.0300***	0.0015	0.0103***	0.0093***
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.7985	0.0000	0.0000	0.0000	0.4319	0.0000	0.0000
Age	0.0110***	0.0233***	0.0066***	0.0002	0.0291***	0.0092***	0.0365***	0.0163***	0.0244***	0.0550***	0.0165***	0.0262***	0.0382***
	0.0000	0.0000	0.0000	0.9174	0.0000	0.0021	0.0000	0.0000	0.0018	0.0000	0.0000	0.0000	0.0000
Age2	-0.0001***	-0.0003***	-0.0001***	-0.0000	-0.0004***	-0.0002***	-0.0005***	-0.0002***	-0.0003***	-0.0007***	-0.0003***	-0.0004***	-0.0005***
	0.0000	0.0000	0.0000	0.3082	0.0000	0.0000	0.0000	0.0000	0.0027	0.0000	0.0000	0.0000	0.0000
Marital status (married=1)	0.0194***	0.0317***	0.0113***	-0.0650***	-0.0139	0.0086	-0.0628***	0.0056	0.0500	-0.0235	-0.0500***	-0.1072***	-0.0580***
	0.0009	0.0015	0.0000	0.0000	0.2227	0.5889	0.0000	0.6745	0.1990	0.1208	0.0046	0.0000	0.0006
Household labor size	-0.0080***	-0.0287***	-0.0016***	0.0038	-0.0097***	0.0207***	0.0057*	-0.0045*	0.0627***	-0.0119***	0.0022	0.0011	-0.0051
	0.0000	0.0000	0.0000	0.2066	0.0000	0.0000	0.0627	0.0786	0.0000	0.0000	0.5796	0.7539	0.1873
Female headed household	-0.0084	0.1302***	0.0109***	0.0181	0.0599***	-0.0850***	0.0484***	0.0052	0.0605	-0.0025	0.0347	0.0899***	0.1208***
	0.1409	0.0000	0.0005	0.3586	0.0000	0.0000	0.0000	0.7723	0.2497	0.8721	0.1436	0.0000	0.0000
Land owned	-0.0022***	-0.0016***	-0.0000**	-0.1148***	-0.0016**	-0.0005***	-0.1449***	-0.0264***	0.0209*	0.0817***	-0.0049***	-0.0058***	-0.0044***
	0.0032	0.0000	0.0113	0.0000	0.0491	0.0006	0.0000	0.0001	0.0831	0.0075	0.0000	0.0009	0.0000
Infrastucture/proximity index	0.0160***	-0.0176***	0.0098***	-0.0250***	-0.0036	-0.0327***	-0.0451***	0.0013	0.0473***	-0.0455***	0.0034	-0.0251***	0.0112
	0.0000	0.0000	0.0000	0.0000	0.4100	0.0000	0.0000	0.7424	0.0037	0.0000	0.6333	0.0000	0.1198
Number of observations	8600	22016	35521	14282	13193	7767	11772	4998	1340	9795	6275	10151	5408

Note: Marginal effects at the sample mean reported with p-values presented below calculated using robust standard errors. *** indicates signficance at the 99% level, ** 95% level and * 90% level.

Figure 8. Key factors in labour market participation

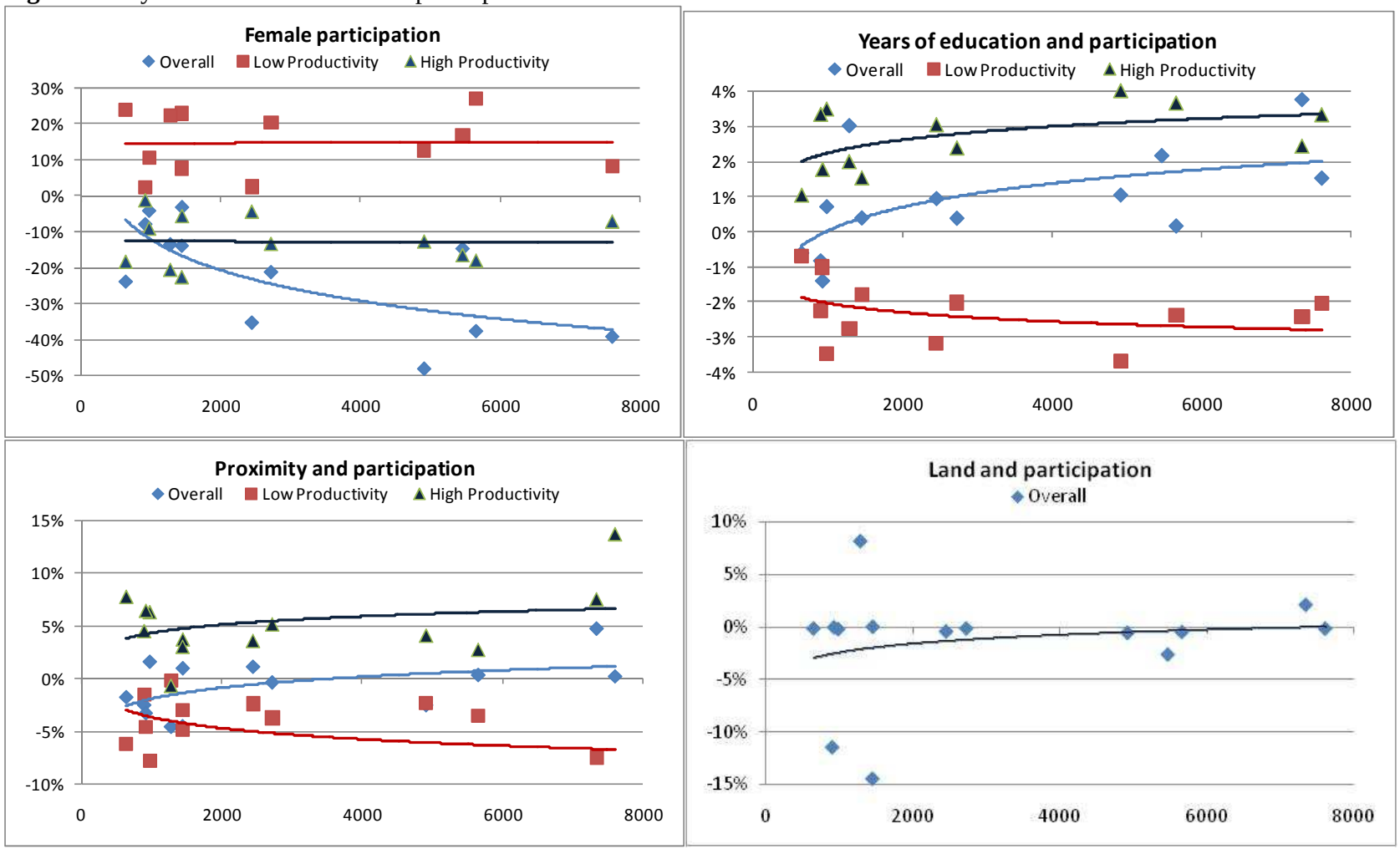

Table 4 - Probits on Participation in Rural Labor Markets, by Productivity Category

	Sub-Saharan Africa			South & East Asia				Eastern Europe & Central Asia			Latin America & Caribbea		
Low Productivity	Ghana98	Malawi04	Nigeria04	Bang00	Indonesia00	Nepal03	Vietnam98	Albania05	Bulgaria01	Tajik03	Ecuador95	Guat00	Nica01
Gender (female=1)	0.1057**	0.2368***	0.0745**	0.0154	0.2017***	0.0228*	0.2273***	0.1663***	0.0157	0.2232***	0.2684***	0.1261***	0.0235
	0.0262	0.0000	0.0180	0.2232	0.0000	0.0844	0.0000	0.0000	0.7070	0.0000	0.0000	0.0000	0.4369
Education (years)	-0.0348***	-0.0070***	-0.0179***	-0.0225***	-0.0203***	-0.0101***	0.0041	0.0109**	-0.0243***	-0.0278***	-0.0238***	-0.0369***	-0.0320***
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.1552	0.0373	0.0020	0.0000	0.0000	0.0000	0.0000
Age	-0.0194	-0.0424***	-0.0313***	-0.0098***	-0.0323***	-0.0045	-0.0203***	-0.0126	0.0029	-0.0181***	-0.0168***	-0.0225***	-0.0279***
	0.1586	0.0000	0.0001	0.0035	0.0000	0.1793	0.0006	0.2702	0.8196	0.0063	0.0026	0.0000	0.0000
Age2	0.0002	0.0005***	0.0004***	0.0001***	0.0004***	0.0001	0.0003***	0.0003*	-0.0001	0.0002**	0.0002***	0.0003***	0.0003***
	0.2704	0.0000	0.0002	0.0040	0.0000	0.2010	0.0011	0.0679	0.6874	0.0271	0.0057	0.0000	0.0003
Marital status (married=1)	-0.0125	-0.0568***	-0.0027	-0.0779***	-0.0949***	-0.0487***	-0.0145	-0.0362	-0.0951	-0.0479*	-0.0869***	-0.0588**	-0.0742**
	0.8310	0.0004	0.9385	0.0000	0.0003	0.0086	0.5864	0.4452	0.1092	0.0967	0.0012	0.0108	0.0130
Household labor size	-0.0125	0.0035	-0.0030	0.0034	0.0021	-0.0082**	-0.0095	-0.0083	0.0384**	0.0201***	-0.0145**	-0.0206***	-0.0026
	0.4060	0.4830	0.6070	0.4626	0.6826	0.0336	0.1436	0.4017	0.0290	0.0000	0.0189	0.0003	0.7276
Female headed household	-0.0646	-0.0045	-0.0707	0.0681***	-0.0166	0.1076***	0.0185	-0.0493	0.0179	-0.0277	-0.0585*	-0.0014	0.0121
	0.2874	0.7933	0.1577	0.0091	0.5641	0.0000	0.4147	0.5673	0.8023	0.3257	0.0941	0.9607	0.6918
Land owned	-0.0036	0.0001	0.0002	0.0259***	-0.0006	0.0005***	0.0390	-0.0199	0.0041	0.1885***	-0.0003	0.0001	0.0016*
	0.6111	0.7512	0.1439	0.0070	0.7066	0.0004	0.2115	0.3733	0.7966	0.0007	0.7653	0.9092	0.0814
Infrastucture/proximity index	-0.0779***	-0.0623***	-0.0483***	-0.0156*	-0.0372***	-0.0462***	-0.0297***	0.0180	-0.0746***	-0.0022	-0.0357***	-0.0230**	-0.0240*
	0.0000	0.0000	0.0000	0.0616	0.0004	0.0000	0.0064	0.1578	0.0020	0.8362	0.0021	0.0150	0.0975
High Productivity	Ghana98	Malawi04	Nigeria04	Bang00	Indonesia00	Nepal03	Vietnam98	Albania05	Bulgaria01	Tajik03	Ecuador95	Guat00	Nica01
Gender (female=1)	-0.0926*	-0.1847***	-0.0579*	0.0228*	-0.1352***	-0.0137	-0.2273***	-0.1663***	-0.0157	-0.2070***	-0.1814***	-0.1285***	-0.0455
	0.0744	0.0000	0.0804	0.0650	0.0000	0.3752	0.0000	0.0000	0.7070	0.0000	0.0000	0.0000	0.1145
Education (years)	0.0348***	0.0104***	0.0153***	0.0333***	0.0238***	0.0177***	-0.0041	-0.0109**	0.0243***	0.0199***	0.0365***	0.0404***	0.0304***
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.1552	0.0373	0.0020	0.0000	0.0000	0.0000	0.0000
Age	0.0454***	0.0340***	0.0314***	0.0124***	0.0288***	0.0077*	0.0203***	0.0126	-0.0029	0.0059	0.0231***	0.0319***	0.0347***
	0.0080	0.0000	0.0008	0.0001	0.0000	0.0530	0.0006	0.2702	0.8196	0.3155	0.0001	0.0000	0.0000
Age2	-0.0005**	-0.0004***	-0.0003***	-0.0001***	-0.0003***	-0.0001	-0.0003***	-0.0003*	0.0001	-0.0000	-0.0003***	-0.0004***	-0.0005***
	0.0255	0.0000	0.0024	0.0030	0.0000	0.1122	0.0011	0.0679	0.6874	0.6439	0.0008	0.0000	0.0000
Marital status (married=1)	0.0774	0.0689***	0.0419	-0.0011	0.0836***	0.0353*	0.0145	0.0362	0.0951	0.0473*	0.1097***	0.0725***	0.0660**
	0.2473	0.0000	0.2755	0.9502	0.0024	0.0959	0.5864	0.4452	0.1092	0.0619	0.0001	0.0012	0.0241
Household labor size	0.0119	0.0015	0.0105*	0.0038	-0.0020	-0.0133***	0.0095	0.0083	-0.0384**	-0.0164***	0.0095	0.0169***	-0.0013
	0.4627	0.7428	0.0813	0.3782	0.7156	0.0032	0.1436	0.4017	0.0290	0.0000	0.1353	0.0018	0.8572
Female headed household	0.0513	0.0237	0.0778	0.0113	-0.0229	-0.1362***	-0.0185	0.0493	-0.0179	0.0448*	0.0606	0.0151	-0.0195
	0.4665	0.1548	0.1729	0.6582	0.4750	0.0000	0.4147	0.5673	0.8023	0.0717	0.1018	0.5924	0.5168
Land owned	0.0035	0.0004	-0.0000	0.0000	0.0010	0.0001	-0.0390	0.0199	-0.0041	-0.0543	-0.0008	0.0028**	-0.0010
	0.6661	0.1989	0.9151	0.9962	0.5137	0.6482	0.2115	0.3733	0.7966	0.2703	0.3485	0.0360	0.2726
Infrastucture/proximity index	0.0624***	0.0769***	0.0367***	0.0445***	0.0509***	0.0637***	0.0297***	-0.0180	0.0746***	-0.0072	0.0269**	0.0402***	0.0352**
	0.0007	0.0000	0.0024	0.0000	0.0000	0.0000	0.0064	0.1578	0.0020	0.4457	0.0260	0.0000	0.0148
Number of observations	737	9000	1675	6361	3409	4829	3356	671	630	3211	2342	3935	1767

Notes: Marginal effects at the sample mean reported with p-values presented below calculated using robust standard errors. *** indicates signficance at the 99% level, ** 95% level and * 90% level.

Table 5 - Probits on Participation in Rural Labor Markets: By Industry

	Sub-Saharan Africa			South & East Asia				Eastern Europe & Central Asia			Latin America			
	Ghana	Malawi	Nigeria	Banglades	Indonesia	Nepal	Vietnam	Albania	Bulgaria	Tajikistan	Ecuador	Guatemala	Nicaragua	Panama
Gender														
Agriculture	-0.1527***	0.0848***	0.0698**	-0.0299**	0.0512***	-0.0773***	0.0612***	-0.0771**	-0.0082	0.0927***	-0.2413***	-0.3227***	-0.4466***	-0.4635***
	0.0000	0.0000	0.0304	0.0267	0.0076	0.0000	0.0022	0.0335	0.7924	0.0000	0.0000	0.0000	0.0000	0.0000
Manufacturing	0.0447	-0.0438***	-0.0103	0.0152	0.0783***	0.0006	0.0392***	0.0591**	0.0064	0.0047**	0.0085	0.0926***	-0.0029	-0.0408***
	0.1594	0.0000	0.1423	0.1080	0.0000	0.9583	0.0005	0.0185	0.8624	0.0269	0.5600	0.0000	0.8357	0.0000
Construction	-0.0104	-0.0049	-0.0223***	-0.0157***	-0.1365***	-0.0642***	-0.1276***	-0.2928***	-0.0070	-0.0392***	-0.1424***	-0.1074***	-0.0664***	-
	0.3135	0.2431	0.0000	0.0025	0.0000	0.0000	0.0000	0.0000	0.5229	0.0000	0.0000	0.0000	0.0000	-
Commerce	0.0599*	-0.0190***	-0.0475*	-0.0102	-0.0333***	0.0016	-0.0132*	-0.0339	-0.0389	-0.0425***	0.0146	-0.0172	-0.0240*	0.0231
	0.0947	0.0000	0.0867	0.2761	0.0036	0.8237	0.0672	0.3046	0.2862	0.0000	0.3373	0.1718	0.0533	0.2108
Services	0.1270**	-0.0244***	0.0581*	0.0496***	0.0409**	0.0547***	0.0673***	0.4348***	0.0480*	0.0092	0.1236***	0.2713***	0.4898***	0.4717***
	0.0185	0.0000	0.0805	0.0000	0.0130	0.0000	0.0000	0.0000	0.0587	0.5186	0.0000	0.0000	0.0000	0.0000
Mining/Utilities	-0.0365***	-0.0045***	-	-0.0011	-0.0106***	0.0004	-0.0066**	-0.0436**	0.0040	-	-0.0257***	-0.0027**	-0.0135***	-0.0084**
	0.0034	0.0005	-	0.3985	0.0020	0.9013	0.0280	0.0376	0.8952	-	0.0014	0.0361	0.0058	0.0411
Education														
Agriculture	-0.0137***	-0.0112***	-0.0323***	-0.0405***	-0.0298***	-0.0773***	-0.0371***	-0.0193***	-0.0133**	-0.0573***	-0.0477***	-0.0557***	-0.0562***	-0.0487***
	0.0000	0.0000	0.0000	0.0000	0.1165	0.0000	0.0000	0.0006	0.0311	0.0000	0.0000	0.0000	0.0000	0.0000
Manufacturing	-0.0122***	0.0003	-0.0011**	0.0042***	0.0002	-0.0004	0.0014	-0.0060**	-0.0092	-0.0004	0.0052***	-0.0008	0.0036**	-0.0005
	0.0000	0.4653	0.0416	0.0013	0.1058	0.9583	0.4218	0.0220	0.1628	0.1962	0.0018	0.5814	0.0323	0.6304
Construction	-0.0027**	0.0007	-0.0005	-0.0012*	-0.0038***	-0.0168***	-0.0084***	-0.0419***	0.0022	-0.0015**	-0.0056***	-0.0005	-0.0032**	-0.0029**
	0.0110	0.2767	0.2718	0.0894	0.1203	0.0000	0.0000	0.0000	0.2333	0.0353	0.0001	0.6613	0.0354	0.0129
Commerce	-0.0077**	0.0016***	-0.0132***	0.0034**	0.0017*	0.0022**	0.0020*	-0.0034	-0.0014	-0.0012	0.0071***	0.0106***	0.0057***	0.0069***
	0.0101	0.0000	0.0000	0.0105	0.3514	0.8237	0.0597	0.4649	0.8331	0.1881	0.0001	0.0000	0.0000	0.0003
Services	0.0520***	0.0064***	0.0443***	0.0211***	0.0235***	0.0240***	0.0378***	0.0888***	0.0206***	0.0515***	0.0231***	0.0198***	0.0241***	0.0303***
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Mining/Utilities	-0.0011	0.0001	-0.0001***	-0.0000	0.0002	0.0004	-0.0005	0.0003	0.0129**	-0.0000	0.0015**	0.0001	0.0012***	-0.0001
	0.2125	0.4688	0.0033	0.8443	0.7704	0.9013	0.3075	0.8913	0.0355	0.9069	0.0196	0.6672	0.0012	0.8650
Infrastucture														
Agriculture	-0.0238*	-0.0632***	-0.1036***	-0.0665***	-0.0779***	-0.1042***	-0.1085***	-0.0403***	-0.1071***	0.0149	-0.0937***	-0.1259***	-0.1272***	-0.1040***
	0.0568	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0001	0.0000	0.1690	0.0000	0.0000	0.0000	0.0000
Manufacturing	-0.0029	0.0032***	-0.0003	0.0092**	0.0240***	-0.0107*	0.0359***	0.0086	0.0203	-0.0080***	0.0096	0.0216***	0.0113*	0.0047
	0.8337	0.0029	0.9323	0.0404	0.0008	0.0787	0.0000	0.3046	0.3130	0.0034	0.1471	0.0001	0.0999	0.2946
Construction	0.0090**	-0.0004	-0.0025	-0.0103***	0.0045	-0.0254***	0.0269***	0.0113	-0.0024	-0.0063**	0.0079	0.0180***	0.0078	0.0158***
	0.0222	0.8315	0.2663	0.0036	0.3970	0.0004	0.0000	0.4815	0.7147	0.0131	0.1483	0.0000	0.1501	0.0050
Commerce	0.0095	0.0014*	0.0466***	0.0036	0.0211***	0.0141***	0.0180***	0.0167	0.0539***	-0.0127***	0.0377***	0.0276***	0.0240***	0.0542***
	0.4868	0.0663	0.0000	0.4182	0.0024	0.0000	0.0000	0.1617	0.0093	0.0013	0.0000	0.0000	0.0003	0.0000
Services	0.0047	0.0283***	0.0784***	0.0165***	0.0242**	0.0340***	-0.0093	0.0067	0.0145	0.0173**	0.0279***	0.0083	0.0278**	-0.0048
	0.7993	0.0000	0.0000	0.0000	0.0124	0.0000	0.2545	0.7145	0.2986	0.0351	0.0001	0.1350	0.0328	0.6654
Mining/Utilities	0.0065*	0.0005***	-0.0003	0.0014***	-0.0006	0.0047***	0.0001	0.0072	0.1078***	-0.0002**	0.0003	0.0018***	0.0026*	0.0056***
	0.0589	0.0009	0.3082	0.0000	0.7325	0.0001	0.9483	0.2554	0.0000	0.0434	0.9043	0.0099	0.0976	0.0007

Notes: (1) P-values are reported below coefficients. (2) *** indicates signficance at the 99% level, ** at the 95% level, and * at the 90% level.

Table 6 - Regressions on Total Wages in Rural Labor Markets

	Sub-Saharan Africa			**South & East Asia**				**Eastern Europe & Central Asia**			**Latin America**			
	Ghana	Malawi	Nigeria	Banglades	Indonesia	Nepal	Vietnam	Albania	Bulgaria	Tajikistan	Ecuador	Guatemala	Nicaragua	Panama
Gender (female=1)	-0.1469**	-0.2971***	-0.1776**	-0.0253*	-0.3215***	-0.0320*	-0.1851***	-0.4296***	-0.0452	-0.5027***	-0.3648***	-0.2969***	-0.1244***	-0.1050***
	0.0333	0.0000	0.0399	0.0804	0.0000	0.0654	0.0000	0.0000	0.4562	0.0000	0.0000	0.0000	0.0005	0.0028
Education (years)	0.0626***	0.0201***	0.0378***	0.0415***	0.0584***	0.0218***	-0.0060**	0.0135	0.0386***	0.0507***	0.0457***	0.0635***	0.0397***	0.0484***
	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0254	0.2122	0.0002	0.0000	0.0000	0.0000	0.0000	0.0000
Age	0.0252	0.0697***	0.0867***	0.0084**	0.0513***	0.0122***	0.0207***	0.0120	0.0172	0.0365***	0.0212**	0.0465***	0.0396***	0.0410***
	0.2554	0.0000	0.0009	0.0323	0.0000	0.0061	0.0003	0.5969	0.3588	0.0028	0.0197	0.0000	0.0000	0.0000
Age^2	-0.0002	-0.0009***	-0.0010***	-0.0001	-0.0005***	-0.0001**	-0.0003***	-0.0003	-0.0001	-0.0004**	-0.0002*	-0.0006***	-0.0005***	-0.0004***
	0.5003	0.0000	0.0028	0.1279	0.0001	0.0186	0.0003	0.2739	0.5671	0.0138	0.0695	0.0000	0.0000	0.0002
Marital status (married=1)	0.0528	0.1122***	-0.0090	0.1089***	0.2067***	0.0732***	0.0074	0.0105	0.0100	0.0898	0.1087***	0.0496*	0.1259***	0.1052***
	0.5480	0.0000	0.9261	0.0000	0.0000	0.0029	0.7564	0.9176	0.8976	0.1007	0.0093	0.0747	0.0001	0.0010
Land owned	0.0168*	-0.0010	-0.0007	-0.0579***	-0.0007	0.0398***	-0.0227	0.0968**	0.0392**	-0.3945***	-0.0009	0.0025*	-0.0010	0.0025***
	0.0656	0.6617	0.1507	0.0001	0.8111	0.0000	0.4696	0.0369	0.0292	0.0023	0.6472	0.0845	0.2894	0.0001
Infrastucture/proximity index	0.1337***	0.1760***	0.0477	0.0276*	0.1015***	0.0936***	0.0431***	-0.0041	0.0333	-0.0041	0.0553***	0.0452***	0.0280*	0.2108***
	0.0000	0.0000	0.1548	0.0504	0.0000	0.0000	0.0000	0.8991	0.3156	0.8072	0.0066	0.0003	0.0612	0.0000
Number of observations	725	8936	1668	6350	3402	4778	3343	670	630	3204	2321	3930	1764	2638

Notes: (1) P-values are reported below coefficients. (2) *** indicates signficance at the 99% level, ** at the 95% level, and * at the 90% level.

Figure 10. Diversification and specialization of household livelihood strategies

Figure 11. Share of households participating in wage labor activities, by household livelihood strategy

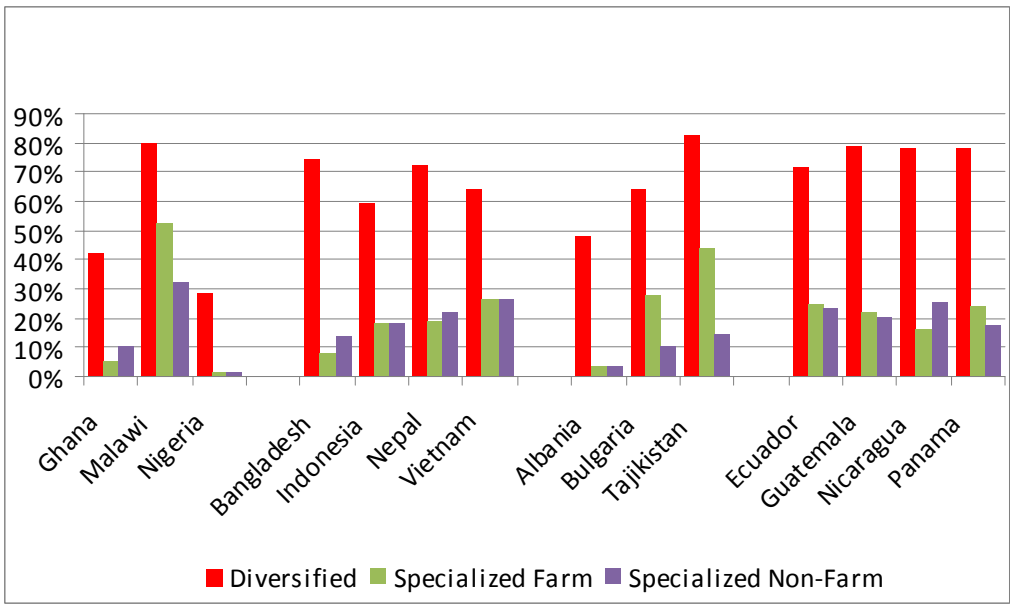

Figure 12. Participation in high wage activities, by household livelihood strategy